



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/008,571	12/03/2001	Ian Tomlinson	8039/1125	6655
29933	7590	10/16/2008	EXAMINER	
Edwards Angell Palmer & Dodge LLP 111 HUNTINGTON AVENUE BOSTON, MA 02199				STEELE, AMBER D
ART UNIT		PAPER NUMBER		
1639				
MAIL DATE		DELIVERY MODE		
10/16/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/008,571	TOMLINSON ET AL.
	Examiner	Art Unit
	Amber D. Steele	1639

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 30 July 2008.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 11,17 and 54-70 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 11,17 and 54-70 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. 09/888,313.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date <u>2/1/08</u> .	6) <input type="checkbox"/> Other: _____ .

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 30, 2008 has been entered.

Status of the Claims

2. The amendment to the claims received on July 10, 2006 canceled claims 1-10, 12-16, and 18-53 and amended claims 11 and 17.

The amendment to the claims received on February 2, 2007 added new claims 54-64.

The amendment to the claims received on November 5, 2007 amended claims 11 and 17.

The amendment to the claims received on July 30, 2008 added new claims 65-70.

Claims 11, 17, and 54-70 are currently pending and under consideration.

Priority

3. The present application claims status as a CIP of U.S. application 09/888,313 filed June 22, 2001 and benefit of U.S. provisional application 60/246,851 filed November 8, 2000. The present application also claims foreign priority to UK 0015443.5 filed June 23, 2000 and UK 0026099.2 filed October 25, 2000.

Invention as Claimed

4. A method for creating a combinatorial library of two-chain polypeptides, wherein each two-chain polypeptide of said library comprises one member of a first repertoire of single chain

polypeptides and one member of a second repertoire of single chain polypeptides, the method comprising the step of providing an array comprising a solid surface that includes said first repertoire of single chain polypeptides deposited on the solid surface in a first series of continuous lines that do not intersect with each other and said second repertoire of single chain polypeptides deposited on the solid surface in a second series of continuous lines that do not intersect with each other wherein each line of the first series of lines intersects with each line of the second series of lines such that each member of the first repertoire is juxtaposed with each member of the second repertoire such that members of the first repertoire are able to interact with members of the second repertoire thereby generating a two-chain polypeptides at the intersection of said first and second series of lines thereby creating a combinatorial library of two-chain polypeptides or alternatively depositing a third repertoire of single-chain polypeptides on the surface in a third series of continuous lines that do not intersect each other and juxtaposing the third repertoire such that the members of the first, second, and third repertoires are able to interact thereby generating three-chain polypeptides and variations thereof.

5. Applicants as their own lexicographers.

Applicants point to paragraph 101 (of the publication for the present application), page 26, starting line 1 for the definition of line (see below) and paragraph 115 (of the publication for the present application), paragraph spanning pages 30-31 for the definition of continuous (see below).

As used herein, the term "line" refers to a continuous distribution of an individual member of a repertoire having the physical shape of a line. A line as used herein may refer to a stream of an aqueous solution which is applied to a solid surface so as to form a line of solution. A line may alternatively refer to a series of droplets which are placed on a solid surface, and

which coalesce to form a continuous line of solution. A line may alternatively refer to a solution or anhydrous compound which is deposited on a solid surface as a spray, provided that the solution or anhydrous compound is deposited in the form of a line. A line may also refer to a tube with a lumen into which a member of a repertoire useful in the invention is placed. A line, useful in the present invention is preferably XX long and YY wide. A line may also refer to a groove, or channel which is cut into a solid surface, such as by manually scratching the surface, or by automated means such as laser etching. As used herein, "cut" refers to producing a linear indentation in a solid surface by scratching, etching, depressing, deforming, chipping, or gouging the solid surface.

As used herein, "continuous" as it refers to a non-intersecting line, refers to the fact that an individual member of a repertoire on an array is present along the entire length of the line, that is, there should be no position in line where the individual member of the repertoire is not present, although the density or concentration of the member may vary along the length of the line.

Therefore, the continuous lines of the present claims may be XX long, YY wide, and the density or concentration can vary along the length of the line.

Information Disclosure Statement

6. The information disclosure statement (IDS) submitted on February 1, 2008 is being considered by the examiner. Please note: the references cited in the search reports were not considered unless the reference was cited separately on the IDS and a copy was provided where applicable.

Withdrawn Rejections

7. The rejection of claims 11, 17, and 54-64 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention regarding continuous lines is withdrawn due to applicant acting as their own lexicographer.

Art Unit: 1639

8. The rejection of claim 11 under 35 U.S.C. 102(b) as being anticipated by Bussow et al. Nucleic Acids Research 26(21): 5007-5008, 1998 is withdrawn upon further consideration (i.e. gridding does not form an end product of two-chain polypeptide; subsequent method steps form dimer, etc.).

9. The rejection of claims 11, 17, 54-56, 59-61, and 64 are rejected under 35 U.S.C. 102(b) as being anticipated by Rowe et al. Anal. Chem. 71(2): 433-439, 1999 (supplied by applicants in IDS) is withdrawn in withdrawn in view of applicants' persuasive arguments (i.e. antibodies utilized by Rowe et al. are not single chain polypeptides).

10. The rejection of claims 11, 17, 54-56, 59-61, and 64 under 35 U.S.C. 103(a) as being unpatentable over Skerra et al. Analytical Biochemistry 196: 151-155, 1991 and Pardos U.S. Patent 4,010,077 issued March 1, 1977 is withdrawn upon further consideration.

11. The rejection of claims 11, 17, 54-56, 59-61, and 64 under 35 U.S.C. 103(a) as being unpatentable over Rodenburg et al. Hybridoma 17(1): 1-8, 1998 and Pardos U.S. Patent 4,010,077 issued March 1, 1977 is withdrawn upon further consideration.

New Rejections

Claim Rejections - 35 USC § 112

12. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 1639

13. Claim 68 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection.

Applicants state that the new claims find support in the specification at page 52.

Page 52 refers to 336 interactions using 37 dispensing events (i.e. 9.081081081... times), thus support for 9 times (i.e. present claim 68) is not provided in the original specification. In

Please note: applicant also refer to Figure 5a, however, this is considered a typographical error wherein Figure 5b shows 16 interactions (4x4) and 8 dispersing events (i.e. two times of present claim 67).

14. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

15. Claims 54-55, 57-60, and 62-63 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. One of skill in the art would not be able to determine the scope of the presently claimed invention. For example, claim 58 requires the first single chain polypeptide to be a light chain and the second polypeptide to be a light chain. However, one of skill in the art would not expect a light chain to interact with another light chain. It is noted that the claims utilize the transitional phrase “is” which may be interpreted as either open or closed. If a closed interpretation is provided then one of skill in the art would be unable to determine the

scope of the claim. Utilization of the transitional phrases “consisting” or “comprising” is suggest. In addition, applicants may also wish to utilize the term scFv instead. Furthermore, applicants have defined “antibody polypeptide” in the specification as various molecules including single chain (VH, VL, etc.), dimers (Fab, etc.), and multimers (typical antibody structure, etc.). Therefore, one of skill in the art would not be able to determine if a single-chain polypeptide is actually single-chain or if single-chain is “defined” in the specification to include dimers or multimers. See page 28 of the present specification.

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 11, 17, and 54-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feldstein et al. U.S. Patent 6,192,168 filed April 9, 1999; Dower et al. U.S. Patent 5,427,908 issued June 27, 1995; and McCafferty et al. U.S. Patent 5,969,108 issued October 19, 1999.

For present claims 11 and 17, Feldstein et al. teach a microfluidic device for multianalyte interactions wherein a multimode waveguide (i.e. solid surface) is paired with a fluidic cell, flow chamber, or flow cell to perform multianalyte and multisample assays comprising flowing a first set of reagents into multiple channels (i.e. continuous lines) wherein the first set of reagents is deposited on the waveguide, then placing another set of channels perpendicular (i.e. intersection, juxtaposed) to the first set of deposited reagents and flowing a second and/or third set of reagents through the channels wherein the first, second, and/or third set of reagents can interact (please

refer to the entire specification particularly the abstract; Figures 7a-7b and 8a-8b; columns 3-13; claims 1-31).

For present claims 54-64, Feldstein et al. teach antibodies and antigens (i.e. heavy and light chains; please refer to the entire specification particularly column 6, lines 37-67; column 7, lines 1-7; columns 10-12; claim 7).

For present claims 65 and 69, Feldstein et al. teach flowing reagents into channels for deposition on a waveguide (i.e. continuous lines; please refer to the entire specification particularly Figures 7a-7b and 8a-8b; columns 4, 6-7, 10-13).

For present claims 66 and 70, Feldstein et al. teach depositing via flowing a first reagent in horizontal lines then depositing via flowing a second reagent (i.e. arraying prior to interaction wherein the flow begins prior to the first and second reagents interact; please refer to the entire specification particularly Figures 7a-7b and 8a-8b; columns 4, 6-7, 10-13).

For present claims 67-68, Feldstein et al. teach 12 deposits (i.e. 6 horizontal flows and 6 vertical flows) with 36 interaction sites and 8 deposits (i.e. 4 horizontal lines and 4 vertical lines) with 16 interactions (i.e. comprises 2 times; please refer to the entire specification particularly Figures 8a-8b and 10). In addition, Feldstein also teach 6x6 arrays, 4x4 arrays, 8x8 arrays, or more wherein any number of channels could be utilized (i.e. 9 times, experimental design choice; please refer to Figures 7a-7b, 8a-8b, 10; columns 10-11).

However, Feldstein et al. does not teach single chain polypeptides.

For present claims 11, 17, and 54-64, Dower et al. teach methods of screening single-chain polypeptides for binding comprising producing a library of antibody light chains and a

library of antibody heavy chains, combining the heavy and light chains and screening for antigen binding (please refer to the entire specification particularly columns 3-5, 14-15; claims 1-17).

However, Feldstein et al. nor Dower et al. teach single chain polypeptides comprising both a VH and VL (i.e. scFv).

For present claims 11, 17, and 54-64, McCafferty et al. teach methods of screening libraries of scFv for binding (please refer to the entire specification particularly column 11; Examples 1-48).

The claims would have been obvious because the substitution of one known element (i.e. antibody; multimer taught by Feldstein et al.) for another (i.e. single-chain antibody, single-chain antibody fragment, scFv taught by Dower et al. and/or McCafferty et al.; utilization of scFv in sandwich assay taught by Feldstein et al.) would have yielded predictable results (i.e. VH-VL binding, antibody-antigen binding, etc.) to one of ordinary skill in the art at the time of the invention. See *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007).

Maintained Rejections

18. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. Please note: the rejections may have been altered to reflect the claim amendments.

Claim Rejections - 35 USC § 103

19. Claims 11, 17, 54-67, and 69-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rowe et al. Anal. Chem. 71(2): 433-439, 1999 (supplied by applicants in IDS) and Stevens et al. U.S. Patent 6,485,943 filed March 22, 1999.

For present claims 11, 17, 54-56, 59-61, 64-66, and 69-70, Rowe et al. teach methods of producing two-chain or three-chain polypeptides comprising utilizing an array immunosensor wherein vertical channels comprise antibodies and adding samples flowed through horizontal channels (e.g. single-chain polypeptides; first repertoire and/or second repertoire; continuous lines that may be at 179° angles if two single-chain polypeptides per channel to make VH-VL for example) wherein the vertical and horizontal channels are at 90° angles and 20 interactions are possible via 9 deposits (i.e. 2.222... times; please refer to entire reference particularly Figure 1; experimental section).

However, Rowe et al. does not specifically teach making VH-VH or VL-VL two-chain polypeptides or the VH-VH or VL-VL two-chain polypeptides bound to antigen to make three-chain polypeptides.

For present claims 57-58 and 62-63, Stevens et al. teach methods of making recombinant antibody subunit dimers including VH-VH and VL-VL and screening against antigen comprising providing VH and/or VL and interacting the VH and/or VL (please refer to entire specification particularly abstract; column 4, lines 44-67; column 5, lines 1-9; column 6, lines 20-41; column 7, lines 23-36; columns 9-10).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the method of producing two-chain or three-chain polypeptides comprising utilizing an array immunosensor taught by Rowe et al. with the VH-VH or VL-VL taught by Stevens et al.

One having ordinary skill in the art would have been motivated to do this because Rowe et al. teach that immunosensors are easy to use, provide rapid assay times, have sensitivity

comparable to ELISA, and can be utilized to study multianalyte binding (please refer to introduction and conclusion sections). In addition, Stevens et al. teach homologous dimerization of antibody subunits and altering amino acid sequences in the interfacial segments to improve yields of Fab and Fv products and studying the interactions via dimerization assays/screens (please refer to columns 4-5).

One of ordinary skill in the art would have had a reasonable expectation of success in the modification of the method of producing two-chain or three-chain polypeptides comprising utilizing an array immunosensor taught by Rowe et al. with the VH-VH or VL-VL taught by Stevens et al. because Rowe et al. teach utilizing immunosensors to study multianalyte interactions (e.g. VH, VL, antigen, dimmers, trimers; please refer to conclusion).

Therefore, the modification of the method of producing two-chain or three-chain polypeptides comprising utilizing an array immunosensor taught by Rowe et al. with the VH-VH or VL-VL taught by Stevens et al. render the instant claims *prima facie* obvious.

Arguments and Response

21. Applicants' arguments directed to the rejection under 35 USC 103 (a) as being unpatentable over Rowe et al. Anal. Chem. 71(2): 433-439, 1999 (supplied by applicants in IDS) and Stevens et al. U.S. Patent 6,485,943 filed March 22, 1999 for claims 11, 17, 54-67, and 69-70 were considered but are not persuasive for the following reasons.

Applicants contend that Rowe et al. does not teach single chain polypeptides (i.e. antibodies), the biological samples are not a repertoire of single chain polypeptides, spots are utilized, and the first series of lines is separated by blocking reagent to prevent nonspecific

binding. In addition, applicants contend that there is no motivation to combine Rowe et al. and Stevens et al. and that Stevens et al. does not make up for the deficiencies of Rowe et al.

Applicants' arguments are not convincing since the teachings of Rowe et al. and Stevens et al. render the method of the instant claims *prima facie* obvious. Rowe et al. teach screening for antigen-antibody interactions wherein the antigens are SEB, F1, D-dimer, or part of blood samples (i.e. single chain polypeptides, open claim language includes presence of dimers, etc. in the library; see abstract, Experimental section). Regarding the use of the term spots by Rowe et al., the spots refer to the fluorescence detection (i.e. spot of fluorescence wherein a positive interaction occurs; not referring to the initial patterning of the sample; applicants are also respectfully directed to present Figures 4, 6, and 12 of the present specification wherein the spots visible after detection are due to a positive interaction). Regarding the use of blocking reagents by Rowe et al., applicants define continuous as a line wherein "the density or concentration of the member may vary along the length". Thus, the use of blocking reagent by Rowe et al. to fill in spaces between the three-dimensional structures of one antibody from another antibody due to a variation in density or concentration along the line is within the definition of continuous lines as taught by applicant. In addition, Rowe et al. (Figure 1) teaches utilizing channels for both the antibody and the antigen samples. Furthermore, it is noted that blocking reagents are commonly utilized in assays including ELISAs wherein the entire surface (i.e. bottom of well) is coated with a "continuous" wash of capture antibody, but due to variations in density and concentration a blocking reagent is utilized to fill spaces created due to the three-dimensional spaces between the antibodies. Moreover, applicants clearly state on the record, that the BSA blocking agent utilized by Rowe et al. is a single chain polypeptide. While applicants state that the BSA is not a

repertoire of polypeptides, it is noted that BSA + antibodies would be considered a repertoire.

Applicants also define repertoire in the present specification (page 25) broadly as a group of members and then more narrowly as a group of variant members. Therefore, the broadest reasonable interpretation (i.e. group of members; all members may be the same) is provided to the terms in the present claims.

Please refer to the motivation statement provided in the rejection above. In addition, applicants are respectfully directed to *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007).

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Double Patenting

20. Claims 11, 17, and 54-70 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10, 12, and 14-44 of copending Application No. 10/161,145. Although the conflicting claims are not identical, they are not patentably distinct from each other because both the present invention and the invention of U.S. application 10/161,145 are drawn to methods comprising arraying a plurality of polypeptides on a support which can be single-chain or two-chain, arraying a second plurality of polypeptides/targets on a support which can be single-chain, and juxtaposing the supports so that either two-chain or three-chain polypeptides are produced (please note: three-chain polypeptides

read on antibodies bound to antigens as defined in the present specification; two-chain polypeptides read on scFv bound to antigen).

For present claims 11, 17, and 54-70, U.S. application 10/161,145 claim immobilizing target molecules on a first support wherein the target molecules can be protein, polypeptide, amino acid, whole cell or cell extract (e.g. antigen, single-chain polypeptide, VH, VL), arraying a plurality of polypeptides on a second support wherein the polypeptides can be antibodies (e.g. VH, VL, VH-VL, VH-VH, VL-VL), juxtaposing the first and second supports wherein binding can occur (e.g. making a two-chain or three-chain polypeptide library; please refer to claims 1-18).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Arguments and Response

21. Applicants' arguments directed to the rejection on the ground as of nonstatutory obviousness-type double patenting (i.e. provisional) for claims 11, 17, and 54-70 were considered but are not persuasive for the following reasons.

Applicants request that the provisional double patenting rejection be held in abeyance until allowable matter is indicated in one of the cases.

The rejection will not be held in abeyance.

22. Claims 11, 17, and 54-70 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 3-23 of copending Application No. 11/413,427. Although the conflicting claims are not identical, they are not

patently distinct from each other because both the presently claimed invention and the invention as claimed in U.S. application 11/413,427 are drawn to methods comprising arranging a first repertoire in at least one first series of continuous lines, arranging a second repertoire in at least one second series of continuous lines forming an array wherein the first and second lines intersect thereby juxtaposing the first and second repertoires (please note: three-chain polypeptides read on antibodies bound to antigens as defined in the present specification; two-chain polypeptides read on scFv bound to antigen).

For present claims 11, 17, and 54-70, U.S. application 11/413,427 claims a method comprising arranging a first repertoire in at least one first series of continuous lines wherein the first repertoire can be VH or VL, arranging a second repertoire in at least one second series of continuous lines wherein the second repertoire can be VH or VL, forming an array wherein the first and second lines intersect thereby juxtaposing the first and second repertoires, optionally contacting the array with target (e.g. antigen), and allowing binding to create two- or three-chain polypeptides (please refer to claims 1-23).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Arguments and Response

23. Applicants' arguments directed to the rejection on the ground as of nonstatutory obviousness-type double patenting (i.e. provisional) for claims 11, 17, and 54-70 were considered but are not persuasive for the following reasons.

Applicants request that the provisional double patenting rejection be held in abeyance until allowable matter is indicated in one of the cases.

The rejection will not be held in abeyance.

24. Claims 11, 17, and 54-70 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 56-68, 78-86, and 118-119 of copending Application No. 09/888,313. Although the conflicting claims are not identical, they are not patentably distinct from each other because both the presently claimed invention and the invention as claimed in U.S. application 09/888,313 are drawn to methods comprising arranging a first repertoire in a series of continuous lines, arranging a second repertoire in a series of continuous lines, and forming an array via intersecting the lines and juxtaposing the first and second repertoires (please note: three-chain polypeptides read on antibodies bound to antigens as defined in the present specification; two-chain polypeptides read on scFv bound to antigen).

For present claims 11, 17, and 54-70, U.S. application 09/888,313 claims a method comprising arranging a first repertoire in a series of continuous lines wherein the first repertoire can be VH or VL, arranging a second repertoire in a series of continuous lines wherein the second repertoire can be VH or VL, optionally, forming an array via intersecting the lines and juxtaposing the first and second repertoires, and optionally contacting the array with a target epitope (e.g. antigen, forming two- or three-chain polypeptides; please refer to claims 56-68 and 78-86)

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Arguments and Response

25. Applicants' arguments directed to the rejection on the ground as of nonstatutory obviousness-type double patenting (i.e. provisional) for claims 11, 17, and 54-70 were considered but are not persuasive for the following reasons.

Applicants request that the provisional double patenting rejection be held in abeyance until allowable matter is indicated in one of the cases.

The rejection will not be held in abeyance.

Conclusion

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. WO 00/62105.

Future Communications

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amber D. Steele whose telephone number is (571)272-5538. The examiner can normally be reached on Monday through Friday 9:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James (Doug) Schultz can be reached on 571-272-0763. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1639

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Amber D. Steele/
Patent Examiner, Art Unit 1639

October 3, 2008